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East Central Kansas Experiment Field

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Abstract

The research program at the East Central Kansas Experiment Field is designed to keep area crop producers abreast of technological advances in agronomic agriculture. Specific objectives are to 1) identify top performing varieties and hybrids of wheat, corn, soybean, and grain sorghum; 2) establish the amount of tillage and crop residue cover needed for optimum crop production; 3) evaluate weed and disease control practices using chemical, no chemical, and combination methods; and 4) test fertilizer rates, timing, and application methods for agronomic proficiency and environmental stewardship.

Keywords

weather, precipitation, soil, crops

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Introduction

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Soil Description

Soils on the field's 160 acres are Woodson. The terrain is upland and level to gently rolling. The surface soil is a dark gray-brown, somewhat poorly drained silt loam to silty clay loam over slowly permeable clay subsoil. The soil is derived from old alluvium. Water intake is slow, averaging less than 0.1 in./hour when saturated. This makes the soil susceptible to water runoff and sheet erosion.

2016 Weather Information

Precipitation during 2016 was about average, and only June was below average during the growing season (Table 1). Overall, the 2016 growing season was similar to 2015. The summer of 2016 had 39 days exceeding 90°F, but none of those days exceeding 100°F, compared to 2015, which had 37 days exceeding 90°F, but none of those days exceeding 100°F. There were only 8 days with low temperatures in the single digits, compared to 14 days in 2015. The last freezing temperature in the spring was April 12 (average, April 18), and the first killing frost in the fall was November 13 (average, October 21). There were 215 frost-free days, compared to the long-term average of 185.

With the exception of a dry June, the growing conditions were very favorable. The short-season and full-season corn hybrid trials averaged 153 and 178 bu/a, respectively. The soybean yields were very good, with the soybean variety trial averaging 79 bu/a, compared to 59 bu/a in 2015 and 41 in 2014.

Table 1. Precipitation at the East Central Kansas Experiment Field, Ottawa

Month	2016	35-year avg.	Month	2016	35-year avg.
	---------- in. ----------			---------- in. ----------	
January	0.63	1.03	July	5.64	3.37
February	0.62	1.32	August	6.53	3.59
March	1.96	2.49	September	5.81	3.83
April	3.91	3.50	October	1.29	3.43
May	6.06	5.23	November	0.26	2.32
June	1.87	5.21	December	0.87	1.45
			Annual total	35.45	36.78